

M.Sc. (Geology) (CBCS Pattern) Sem-III  
**PSCGEOT09 - Hydrogeology and Watershed Management Paper-I**

P. Pages : 2

Time : Three Hours



**GUG/W/22/11270**

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.  
2. Draw neat sketches wherever necessary.

1. Give detailed account of mode of occurrence of groundwater in different geological formations.

**OR**

Write short notes on-

- a) Specific retention
  - b) Hydraulic conductivity
  - c) Flow net analysis
  - d) Springs
2. Discuss saline water intrusion in coastal and other aquifers and its preventive measures.

**OR**

Write short notes on-

- a) Total hardness
  - b) Electrical conductivity
  - c) Environmental effects of over-exploitation of groundwater
  - d) Causative factors of ground water level fluctuations
3. Give detailed account of pump tests and evaluation of hydrologic properties.

**OR**

Write short notes on-

- a) Surface methods of groundwater exploration
- b) Preparation of hydrographs
- c) Selection of suitable site for well construction
- d) Types and designs of wells

4. Describe in detail conjunctive use of groundwater and surface water.

**OR**

Write short notes on:

- a) Gabbion structure
- b) Importance of water resources
- c) Role of NGO's in watershed development.
- d) Technical aspects of artificial recharge structures.

5. Write short notes on -

- a) Permeability
- b) Specific yield
- c) pH of groundwater
- d) Nitrate contamination in groundwater
- e) Well competition
- f) Well development
- g) Percolation tank
- h) Recharge pits

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